



## PATENT ABSTRACTS OF JAPAN

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**(54) CONTROL CIRCUIT BY PULSE WIDTH  
 MODULATION SIGNAL**

**(57) Abstract:**

**PURPOSE:** To reduce power consumption while keeping a control gain to a nearly constant value by providing a comparison voltage generating circuit section generating a triangle wave voltage whose amplitude is changed with the fluctuation of a power supply voltage so as to make the ratio of the power supply voltage to the amplitude of the triangle wave voltage even if the power voltage is fluctuated.

**CONSTITUTION:** An analog control signal  $S_e$  for tracking control is applied to a terminal 11. On the other hand, a clock pulse  $P_c$  having a prescribed period and a prescribed width is applied from a terminal 16 and fed to a Miller integration charge/discharge circuit 17. Then an output terminal of the Miller integration charge/discharge circuit 17 is connected to a connecting point  $Q_1$  of a voltage division circuit via a capacitor 17c and a triangle wave voltage  $S_d$  is applied. Pulse width modulation control signals  $S_a$ ,  $S_b$  are fed to input terminals 33, 34 of a drive circuit 32 succeedingly. Since the current  $I$  applied to an electromagnetic coil 43 is fed intermittently as shown in Fig. D, the power consumption in the electromagnetic coil 43 is decreased, and further, the ratio of the power supply voltage  $E$  to

the amplitude of a triangle wave voltage  $S_d'$  or  $S_d''$  is kept nearly constant even if the power supply voltage  $E$  is fluctuated and the control gain is kept constant substantially.

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